[0021] FIG. **1** illustrates an LTE network **100**, comprising a core network part EPC (Evolved Packet Core) and radio access part (E-UTRAN), where an embodiment of the present invention is implemented. The connections shown in FIG. **1** are logical connections; the actual physical connections may be different. It is apparent to a person skilled in the art that the systems also comprise other functions and structures. The MME and S-GW of EPC can reside in a single node in the network or be separated. Thus, in FIG. **1** an implementation is shown where the MME and S-GW are in a single network node MME/SGW **102**, **104**. The network of FIG. **1** provides radio signal coverage through eNBs **106**, **108**, **110**. As is defined in 3GPP specifications, 3GPP TS 36.300 for example, the MME/S-GW connect to eNBs using S1 logical interface and eNBs connect to each other using X2 logical interface.

[0022] A logical interface such as S1 and X2 in FIG. **1**, can be defined as a set of operations. The set of operations can comprise protocols and functions provided between nodes in the network. When nodes are connected using a logical interface, they implement means to decode and receive communications through the interface, thus the nodes can decode and receive the protocols used for communications on that interface. In addition to just decoding the protocols, a logical interface defines messages transmitted between the nodes. The messages enable services and functions between the nodes. Accordingly a logical interface defines a set of operations. For example in LTE network, such as network in FIG. **1**, S1 interface operations comprise setting up, modifying and release of SAE (System Architecture Evolution) bearers, mobility support, paging, transport of NAS (non-access stratum). signaling, S1 interface management, network sharing, roaming and area restriction, NAS node selection and initial context setup. X2 interface operations comprise intra LTE mobility support such as handover control, load management and error handling.

[0023] The current work being done in 3GPP targets at introducing the LTE E-UTRAN network Home NodeBs (HNBs). HNB can be seen as a base station to provide radio signal coverage on a relatively small area such as at people's homes and areas where it would not be cost efficient to deploy a fully-fledged eNB. Also, the responsibility of deployment and start-up of HNBs can be delegated from the operators of the network to subscribers of the network. Thus, subscribers subscribed to a network such as shown in FIG. **1** can deploy HNBs to extend their subscription network coverage. The HNBs may be preconfigured by the network operator, to operate in the network. Alternatively the subscriber may perform all or part of the configuration according to instructions from the network operator.

[0024] In FIG. **1** network **100**, Home NodeBs (HNBs) **112**, **114**, **116** and **118**, are deployed to extend the radio signal coverage of the eNBs. While providing radio signal coverage like eNBs, HNBs do not necessarily contain all the same functionalities as eNBs. In FIG. **1**, HNBs are connected to the network via eNB providing a relayed S1 interface and X2 interface for HNB. Accordingly, each HNB only communicates directly with single eNB operating on higher network layer than HNB. eNB operating on a higher network layer is connected to a centralized node in the network or has a shorter connection than HNB to such a node. In the following such eNB is called a macro-layer eNB. Macro-layer eNBs **106**, **108**, **100** in FIG. **1** are configured to provide S1 and X2 connectivity for HNBs. Consequently, S1 and X2 connections of HNBs are handled by the macro-layer eNB. For example, macro-layer eNB such as eNB **106** provides X2 interface between HNBs **112** and **114** and a relayed S1 interface between HNBs and the MME/S-GW **102**. Thus, communications between HNBs and between HNB and core network is enabled.

[0025] When HNB is connected to the network, default macro-layer eNB is selected and defined for HNB. HNB connecting to the network connects to the network through the default macro-layer eNB and sets up connectivity with MME/S-GW. The default macro-layer eNB may be defined for example in HNB as IP (Internet protocol) address the HNB connects to for connecting to the network. During the operational time of HNB the macro-layer connection of the HNB can be re-directed to another eNB due to load balancing between the eNBs. Re-direction may also be done due to failures in the eNB for example if the eNB or individual cells of eNB are out of use. The default macro-layer eNB is defined in HNB when HNB is initially connected to the operator's network (e.g. first time) so that HNB can connect to the default macro-layer eNB also after disconnection. This may be the case for example when switching on the HNB after switching it off.

[0026] Macro-layer eNB connecting one or more HNBs to network provides at least part of the operations of S1 and X2 interface to HNBs by relaying the S1 and X2 connections to HNBs.

[0027] FIG. **2** shows a block diagram of an apparatus according to an embodiment of the invention. The apparatus comprises communication means such as means for transmitting and means for receiving. The apparatus also comprises means for establishing connections to other devices, for example devices in the network **100** of FIG. **1**. These may be implemented in separate units or in a single functional transceiver unit Tx/Rx **202**. Tx/Rx unit may comprise of one or more physical wired or wireless interfaces or logical interfaces for different networking technologies and thus Tx/Rx unit may be configured to operate according to at least one of these technologies. An example of a communication technology used in the apparatus **200** is LTE defined by 3GPP. Although the apparatus has been depicted as one entity, different modules and memory may be implemented in one or more physical or logical entities. The functionality of the Tx/Rx **202** and control unit **204** is described in more detail below. It should be appreciated that the apparatus may comprise other units used in or for communications or controlling the communications. However, they are irrelevant to the actual invention and, therefore, they need not to be discussed in more detail here. In the embodiment of the invention in LTE network, the Tx/Rx unit of the apparatus is configured to implement functionality pertaining to logical interfaces defined in LTE. For example the apparatus may be MME, S-GW, eNB or HNB in LTE E-UTRAN network and be configured to implement logical interfaces for communication with other apparatuses in LTE network. Consequently, the Tx/Rx unit may be configured to provide radio signal coverage and access to the LTE network to UEs (user equipment) such as mobile terminal, phones or other apparatuses connecting wirelessly to the communication network. Providing radio signal coverage enables the UEs to connect to the network **100** and the subscribers of the UEs gain access to the services available through the network. The services may be for example the Internet. The apparatus comprises also a control unit **204** for controlling transmission of the Tx/Rx unit **202**.